

IN THE CLAIMS:

Please cancel claim 22 without prejudice or disclaimer.

Claims 1 through 4, 7, 11, 12, 14, 15, 19, 21, 23, 27-32 and 34 are amended herein, and new claims 36 and 37 added. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A polycrystalline diamond abrasive element, comprising a ~~layer of polycrystalline diamond layer~~ bonded to a substrate along an interface, the polycrystalline diamond layer having a working surface opposite the interface and an outer peripheral surface extending between the working surface and the interface, the polycrystalline diamond ~~abrasive element layer having consisting~~ of a region rich in catalyzing material and an ~~annular~~ region ~~lean in catalyzing material, the region lean in catalyzing material including an annular portion adjacent to and extending along~~ the peripheral surface ~~extending away from the working surface toward but stopping short of the interface, the annular region portion or a substantial portion thereof being located bounded between at least a portion of the region rich in catalyzing material and the peripheral surface and being lean in catalyzing material.~~

2. (Currently Amended) The polycrystalline diamond abrasive element according to claim 1, wherein the ~~region of the polycrystalline diamond layer lean in catalyzing material also further has a region includes a portion adjacent the working surface which is lean in catalyzing material.~~

3. (Currently Amended) The polycrystalline diamond abrasive element according to claim 1, wherein the annular ~~region or portion thereof of the region~~ lean in catalyzing material extends into the polycrystalline diamond ~~layer~~ from the peripheral surface to a depth of about

30 μ m to about 500 μ m.

4. (Currently Amended) The polycrystalline diamond abrasive element according to claim 1, wherein the annular region portion of the region lean in catalyzing material extends from the working surface toward the interface to a depth of at least half the overall thickness of the polycrystalline diamond layer, but stops short of the interface by at least about 500 μ m.

5. (Canceled).

6. (Previously Presented) The polycrystalline diamond abrasive element according to claim 1, wherein the catalyzing material is present as a sintering agent in the manufacture of the polycrystalline diamond layer.

7. (Currently Amended) The polycrystalline diamond abrasive element according to claim 1, wherein the region rich in catalyzing material itself comprises more than one region a plurality of layers, which layers differ in average particle size or chemical composition.

8. (Previously Presented) The polycrystalline diamond abrasive element according to claim 1, which is a cutting element.

9. (Previously Presented) The polycrystalline diamond abrasive element according to claim 1, wherein the polycrystalline diamond layer comprises a bevel at a peripheral edge of the working surface.

10. (Previously Presented) The polycrystalline diamond abrasive element according to claim 1, wherein the substrate is a cemented carbide substrate.

11. (Currently Amended) A polycrystalline diamond abrasive element, comprising a layer of polycrystalline diamond layer bonded to a substrate along an interface, the

polycrystalline diamond layer having a working surface opposite the interface and an outer peripheral surface extending between the working surface and the interface, the polycrystalline diamond ~~abrasive element~~layer having a consisting of at least one substantially annular region lean in catalyzing material, the at least one region being substantially annular in shape, adjacent the peripheral surface, commencing at a peripheral edge of the working surface and extending away from the working surface toward the interface but spaced therefrom, and at least another region of the polycrystalline diamond layer being rich in catalyzing material.

12. (Currently Amended) The polycrystalline diamond abrasive element according to claim 11, further including a furtherwherein the at least one region lean in catalyzing material in the polycrystalline diamond layer further comprises at least another region lean in catalyzing material adjacent the working surface.

13. (Previously Presented) The polycrystalline diamond abrasive element according to claim 12, wherein at least one of the regions lean in catalyzing material extends into the polycrystalline diamond layer from at least one of the peripheral surface and the working surface to a depth of about 30 μm to about 500 μm .

14. (Currently Amended) The polycrystalline diamond abrasive element according to claim 11, wherein the annularat least one region lean in catalyzing material extends from the working surface toward the interface to a depth of at least half the overall thickness of the polycrystalline diamond layer, but stops short of the interface by at least about 500 μm .

15. (Currently Amended) The polycrystalline diamond abrasive element according to claim 11, wherein the at least another region rich in catalyzing material itself comprises a plurality of regionslayers rich in catalyzing material, which regionslayers rich in catalyzing material differ in at least one of average particle size and chemical composition.

16. (Previously Presented) The polycrystalline diamond abrasive element according to

claim 11, configured as a cutting element.

17. (Previously Presented) The polycrystalline diamond abrasive element according to claim 16, wherein the cutting element is secured to a drill bit.

18. (Previously Presented) The polycrystalline diamond abrasive element according to claim 11, wherein the substrate is a cemented carbide substrate.

19. (Currently Amended) A polycrystalline diamond abrasive element, comprising a layer of polycrystalline diamond layer bonded to a substrate along an interface, the polycrystalline diamond layer having a working surface opposite the interface and an outer peripheral surface extending between the working surface and the interface, the polycrystalline diamond abrasive elementlayer having consisting of a region lean in catalyzing material adjacent at least a portion of the working surface, lean in catalyzing material and a another, substantially annular region lean in catalyzing material adjacent the peripheral surface, contiguous with the region, extending away from the working surface toward the interface and spaced from the interface, and a region rich in catalyzing material in contact with the substrate along the interface and including a portion located between the another, substantially annular region lean in catalyzing material and the interface.

20. (Previously Presented) The polycrystalline diamond abrasive element according to claim 19, wherein at least one of the regions lean in catalyzing material extends into the polycrystalline diamond layer from at least one of the peripheral surface and the working surface to a depth of about 30 μ m to about 500 μ m.

21. (Currently Amended) The polycrystalline diamond abrasive element according to claim 19, wherein the another, substantially annular region extends from the working surface toward the interface to a depth of at least half the overall thickness of the polycrystalline diamond layer, but stops short of the interface by at least about 500 μ m.

22. . . (Canceled).

23. (Currently Amended) The polycrystalline diamond abrasive element according to claim 22~~19~~, wherein the ~~another~~-region rich in catalysing material itself comprises a plurality of regions rich in catalyzing material, which regions rich in catalyzing material differ in at least one of average particle size and chemical composition.

24. (Previously Presented) The polycrystalline diamond abrasive element according to claim 19, configured as a cutting element.

25. (Previously Presented) The polycrystalline diamond abrasive element according to claim 24, wherein the cutting element is secured to a drill bit.

26. (Previously Presented) The polycrystalline diamond abrasive element according to claim 19, wherein the substrate is a cemented carbide substrate.

27. (Currently Amended) A polycrystalline diamond abrasive element, comprising a ~~layer of~~ polycrystalline diamond layer bonded to a substrate along an interface, the polycrystalline diamond layer having a working surface opposite the interface and an outer peripheral surface extending between the working surface and the interface, the polycrystalline diamond abrasive element layer having consisting of at least one region rich in catalyzing material and a substantially annular at least one region lean in catalyzing material adjacent the peripheral surface, substantially annular in configuration and extending from adjacent to the working surface toward the interface, the at least one substantially annular region lean in catalyzing material located between a portion of the at least one region rich in catalyzing material and the peripheral surface, another portion of the at least one region rich in catalyzing material being located adjacent the peripheral surface and between the at least one substantially annular region lean in catalyzing material and the interface.

28. (Currently Amended) The polycrystalline diamond abrasive element according to claim 27, ~~further comprising wherein the at least one region lean in catalyzing material includes~~ another region of the polycrystalline diamond layer lean in catalyzing material and adjacent the working surface.

29. (Currently Amended) The polycrystalline diamond abrasive element according to claim 28, wherein the ~~substantially annular at least one~~ region and the another region of the polycrystalline diamond layer lean in catalyzing material are substantially contiguous.

30. (Currently Amended) The polycrystalline diamond abrasive element according to claim 28, wherein the ~~substantially annular at least one~~ region lean in catalyzing material extends from adjacent the working surface toward the interface a distance greater than a depth of the another region lean in catalyzing material from the working surface.

31. (Currently Amended) The polycrystalline diamond abrasive element according to claim 27, wherein the ~~substantially annular at least one~~ region lean in catalyzing material extends into the polycrystalline diamond from the peripheral surface to a depth of about 30 μm to about 500 μm .

32. (Currently Amended) The polycrystalline diamond abrasive element according to claim 27, wherein the ~~substantially annular at least one~~ region lean in catalyzing material extends from the working surface toward the interface to a depth of at least half the overall thickness of the polycrystalline diamond layer, but stops short of the interface by at least about 500 μm .

33. (Previously Presented) The polycrystalline diamond abrasive element according to claim 27, wherein the catalyzing material is present as a sintering agent in the manufacture of the polycrystalline diamond layer.

34. (Currently Amended) The polycrystalline diamond abrasive element according to claim 27, wherein the at least one region rich in catalyzing material comprises ~~more than one~~ ~~regions~~ ~~a plurality of layers~~, which layers differ in average particle size or chemical composition.
35. (Previously Presented) The polycrystalline diamond abrasive element according to claim 27, which is a cutting element.
36. (Previously Presented) The polycrystalline diamond abrasive element according to claim 27, wherein the substrate is a cemented carbide substrate.
37. (New) The polycrystalline diamond abrasive element according to claim 35, wherein the cutting element is secured to a drill bit.
38. (New) The polycrystalline diamond abrasive element according to claim 8, wherein the cutting element is secured to a drill bit.